

# MP-204/MP-304 (Old)

## December - Examination 2025 M.B.A. (II<sup>nd</sup> Year) Examination QUANTITATIVE TECHNIQUES Paper : MP-204/MP-304 (Old)

[Time: 3 Hours ]

[ Maximum Marks: 80]

**Note :-** The question paper is divided into three Sections A, B and C. Write answers as per the given instructions.

### Section-A

8×2=16

#### (Very Short Answer Type Questions)

**Note :-** Answer **all** questions. As per the nature of the question delimit your answer in one word, one sentence or maximum up to **30** words. Each question carries **2** marks.

1. (i) Explain the meaning of Correlation.
- (ii) Add the following matrix(A + B):  
$$A = \begin{bmatrix} 3 & 6 \\ 5 & 8 \\ -2 & 9 \end{bmatrix} \quad B = \begin{bmatrix} -6 & 1 \\ 0 & 9 \\ 8 & 3 \end{bmatrix}$$
- (iii) Define Time Series.
- (iv) What is Normal Distribution?
- (v) Write any two types of models used in Operation Research.
- (vi) What is Linear Programming?
- (vii) Explain the term 'Game Theory'.
- (viii) Write any two limitations of Index Numbers.

### Section-B

4×8=32

#### (Short Answer Type Questions)

**Note :-** Answer **any four** questions. Each answer should not exceed **200** words. Each question carries **8** marks.

2. Explain the meaning and importance of Correlation.
3. What is Business Forecasting? Explain the objectives underlying the business forecasting.
4. From the following data, construct index number by simple average of price relatives using arithmetic mean.

Commodity	2018 Price (₹)	2021 Price (₹)
Wheat	800/quintal	1000/quintal
Rice	15/kg	19/kg
Milk	12/liter	15/liter
Eggs	10/dozen	12/dozen
Sugar	14/kg	18/kg

5. Explain the meaning and importance of Normal Distribution.
6. Explain importance or utility of Time Series Analysis.
7. What is Network Analysis? When is it used?
8. Obtain regression equations X on Y and Y on X with the help of the following values of X and Y -  
X 1 3 4 6 8 9 11 14  
Y 1 2 4 4 5 7 8 9
9. Write short note on the Queueing Theory.

**Section-C**

**2×16=32**

**(Long Answer Type Questions)**

**Note :-** Answer **any two** questions. You have to delimit your each answer maximum up to **500** words. Each question carries **16** marks.

10. What do you understand by Business Forecasting? Discuss the methods of Business Forecasting.
11. (i) A deck of 52 cards, one card is drawn. What is the probability that it is either a king or a queen?  
(ii) Discuss briefly the uses and limitations of Index Number of prices.
12. What is Operation Research? Why it was needed in industry? And also discuss the scope of Operation Research.
13. (i) Discuss the main features of the Decision Theory.  
(ii) Explain the application of Linear Programming.

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